Appl. No. 10/658,961
Amdt. Dated May 29, 2005
Reply to Office Action of Apr. 13, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A planar surface illuminator for use beneath a liquid crystal display panel, comprising:

a light guide plate comprising a bottom surface;

a plurality of light emitting diodes emitting Gaussian light irradiating the light guide plate, and defining shortfall areas in the light guide plate between each two adjacent light emitting diodes; and

a plurality of dots formed on the bottom surface, wherein at least some of the dots positioned at the shortfall areas are made of melamine-based fluorescent particles and function as small light sources lighting the shortfall areas.

Claim 2 (original): The planar surface illuminator as described in claim 1, wherein the melamine-based fluorescent particles are polymerized with green fluorescent dye and melamine particles.

Claim 3 (original): The planar surface illuminator as described in claim 2, wherein excitation and emission wavelengths of the green fluorescent dye are respectively about 506 and 529 nanometers.

Claim 4 (original): The planar surface illuminator as described in claim 1, wherein the melamine-based fluorescent particles are polymerized with red fluorescent dye and melamine particles.

Claim 5 (original): The planar surface illuminator as described in claim 4, wherein excitation and emission wavelengths of the red fluorescent dye are respectively about 636 and 686 nanometers.

Claim 6 (original): The planar surface illuminator as described in claim 1, wherein the melamine-based fluorescent particles are polymerized with orange fluorescent dye and melamine particles.

Claim 7 (original): The planar surface illuminator as described in claim 6, wherein excitation and emission wavelengths of the orange fluorescent dye are respectively about 560 and 584 nanometers.

Claim 8 (original): The planar surface illuminator as described in claim 1, wherein each melamine-based fluorescent particle is a mixture of green, red and orange fluorescent dyes polymerized with melamine particles.

Claim 9 (previously presented): The planar surface illuminator as described in claim 1, wherein diameters of the melamine-based fluorescent particles are in a range of from 1 to 10 microns.

Claim 10 (previously presented): The planar surface illuminator as described in claim 1, wherein the dots are uniformly spaced apart on the bottom surface.

Claim 11 (previously presented): The planar surface illuminator as described in claim 1, wherein the dots increase in size with increasing distance away from the point light sources.

Claim 12-14 (canceled)

Claim 15 (previously presented): A planar surface illuminator for use beneath a liquid crystal display panel, comprising:

a light guide plate comprising a bottom surface;

a plurality of light emitting diodes emitting Gaussian light irradiating the light guide plate, and defining shortfall areas in the light guide plate between each two adjacent light emitting diodes; and

a plurality of dots formed on the bottom surface, wherein at least some of the dots are coated with melamine-based fluorescent particles and are positioned at the

shortfall areas, and function as small light sources lighting the shortfall areas, for providing even brightness to the liquid crystal display panel.

Claim 16 (previously presented): The planar surface illuminator as described in claim 15, wherein the melamine-based fluorescent particles are polymerized with green fluorescent dye and melamine particles, and excitation and emission wavelengths of the green fluorescent dye are respectively about 506 and 529 nanometers.

Claim 17 (canceled)

Claim 18 (previously presented): The planar surface illuminator as described in claim 15, wherein the melamine-based fluorescent particles are polymerized with red fluorescent dye and melamine particles, and excitation and emission wavelengths of the red fluorescent dye are respectively about 636 and 686 nanometers.

Claim 19 (canceled)

Claim 20 (previously presented): The planar surface illuminator as described in claim 15, wherein the melamine-based fluorescent particles are polymerized with orange fluorescent dye and melamine particles, and excitation and emission wavelengths of the orange fluorescent dye are respectively about 560 and 584 nanometers.

Claim 21 (previously presented): The planar surface illuminator as described in claim 15, wherein each melamine-based fluorescent particle is a mixture of green, red and orange fluorescent dyes polymerized with melamine particles.